

TECK COMINCO & NANA'S RESPONSE TO ADAMS EXHIBIT OBJECTION CHART

Exhibit No.	Title/Description	Bates No.	Objection	Response
1000	2007 Permit (misabeled as "1998 Permit but dated April 12, 2007)	TC 038037-38076 RD	Relevance: permit was never operative and is now withdrawn	Relevance to Penalty: <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.
1003	ADEC COBC for TDS dated June 2, 2002	TC 029771-29805 RD	Relevance: not relevant because this is an Alaska State permit compliance document. Teck Cominco's compliance with Alaska water quality standards is not at issue in this case. What is at issue is Teck Cominco's compliance with its federal permit.	Relevance to Penalty: <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.

1004	ADEC 2004 COBC dated May 10, 2004	NA	Relevance: not relevant because this is an Alaska State permit compliance document. Teck Cominco's compliance with Alaska water quality standards is not at issue in this case. What is at issue is Teck Cominco's compliance with its federal permit.	Relevance to Penalty: <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.
1005	1998 ADEC 401 Certification dated July 22, 1998	NA	Authentication	Witness (McGee) will authenticate
1006	2003 ADEC 401 Certification dated June 23	NA	Relevance; not provided	Relevance to Penalty: <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require. Not Provided: This document is publicly available and Plaintiffs do not assert any prejudice.

1007	2007 ADEC 401 Certification dated February 12, 2007	TC 011191-11193 RD	Relevance: not relevant because ADEC has withdrawn this 401 certification. No longer operative.	Relevance to Penalty: <ul style="list-style-type: none"> seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) good faith efforts to comply; Such other matters as justice may require. The plaintiffs are still actively appealing from this certification.
1008	May 1999 Mine DMR	TC 038613-38661 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> FRE 106 Liability seriousness of violations history of violations good faith efforts to comply Authentication: Numerous witnesses can authenticate.
1020	June 1999 Mine DMR	TC 11203-11206 RD; TC 35171-35173 RD; TC 000234-279 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> FRE 106 liability seriousness of violations history of violations good faith efforts to comply Authentication: Numerous witnesses can authenticate.

1031	July 1999 Mine DMR	TC 035171-35174; TC 24109-24111 RD; TC 11194-11199 RD; TC 000280-349 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate.
1043	August 1999 Mine DMR	TC 035171-35172, 35175; TC 000350-414 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate.
1055	September 1999 Mine DMR	TC 035171-35172, 35176; TC 00419-477 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate.
1084	June 2000 Mine DMR	TC 35171-35172, 35177 RD; TC 11207-11211 RD; TC 000645-702 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate.

1099	July 2000 Mine DMR	TC 035171-35172, 35178; 001082-1144	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate.
1100	Corrected May 2000 and July 2000 DMR sheets	TC 000752-783 RD	Authentication	Authentication: Numerous witnesses can authenticate.
1110	August 2000 Mine DMR	TC 011212-11215; TC 000784-858 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate.
1116	Final Report-Toxicity Evaluation of Outfall 001 to Ceriodaphnia by Parametrix dated August 2000	TC 051054-51090 RD	Authentication, not timely provided	Authenticity: DeForest or Stubblefield can authenticate. Disclosed in Initial Disclosures.
1117	September 2000 Mine DMR	TC 035171-35172, 35179 RD; TC 00859-915 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate

1125	October 2000 Mine DMR	TC 035171-35172, 35180 RD; TC 00932-987 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1136	June 2001 Mine DMR	TC 035171-35172, 35181; TC 000997-1077 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1149	July 2001 Mine DMR	TC 035171-35712, 35182 RD; TC 011216-11218; TC 001078-1134 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1165	August 2001 Mine DMR	TC 035171-35172, 35183 RD; TC 11219-11222 RD; TC 001135-1194 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate

1172	September 2001 Mine DMR	TC 035171-35172, 35184 RD; TC001197-1254 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1193	May 2002 Mine DMR	TC 35171-35172, 35185 RD; TC 005796-5799 RD; TC 001348-1398 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1202	June 2002 Mine DMR	TC 035171-35172, 35186 RD; TC 001399-1451 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1217	July 2002 Mine DMR	TC 011175-11178 RD; TC 006492-6540 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate

1218	Short-Term Chronic Toxicity of Effluents from Red Dog Mine to Pinnephales promelas by ENSR dated July 2002	TC 051134-51373 RD	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Explain DMR's • Capable of repetition • seriousness of violations • history of violations • good faith efforts to comply Authentication: Multiple witnesses can authenticate
1229	August 2002 Mine DMR	TC 011179-1182 RD; TC 6514-6589 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1230	Report of Short Term Chronic Toxicity Testing using Ceriodaphnia by ENSR dated September 6, 2002	TC 051374-51444 RD	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Explain DMR's • Capable of repetition • seriousness of violations • history of violations • good faith efforts to comply Authentication: Multiple witnesses can authenticate
1231 * labeled 2231	Bioassay Report conducted August 7-14, 2002 by CH2MHi11 dated August 2002	TC 051733-51766 RD	Authentication	Multiple witnesses can authenticate.
1232 * labeled 2232	Bioassay Report conducted August 30 through September 3, 2002 by CH2MHi11 dated September 4, 2002	TC 051767-51798 RD	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Capable of repetition • seriousness of violations • history of violations • good faith efforts to comply Authentication: Multiple witnesses can authenticate

1245	September 2002 Mine DMR	TC 035171-35172, 35187 RD; TC 11183-11186 RD; TC 11223-11226 RD; TC 005747-5795 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1264	Short-Term Chronic Toxicity of Effluents from Red Dog Mine to Ceriodaphnia by ENSR dated October 2002	TC 051858-52087 RD	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Explain DMR's • Capable of repetition • seriousness of violations • history of violations • good faith efforts to comply Authentication: Multiple witnesses can authenticate
1275	May 2003 Mine DMR	TC 13401-13405 RD; TC 12890-12896 RD; TC 012835-12889 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1339	June 2004 Mine DMR	TC 31234-31252 RD; TC 13640-13698 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate

1340	July 2004 Mine DMR	TC 031335-31338 RD; TC 31253-31334 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1341	Report of Short-Term Chronic Toxicity Testing using Ceriodaphnia by ENSR dated August 2004	TC 051017-5105.3 RD	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Explain DMR's • Capable of repetition • seriousness of violations • history of violations • good faith efforts to comply Authentication: Multiple witnesses can authenticate
1394	July 2005 Mine DMR	TC 35604-35606, 35611 RD; TC 35377-35458 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1418	August 2005 Mine DMR	TC 35604-35608 RD; TC 35459-35515 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate

1446	September 2005 Mine DMR	TC 035604-35605; 35609-35619 RD; TC 35516-35603 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1604	May 2007 Mine DMR	TC 038199-38269 RD	Relevance (subsequently amended), Authentication	Relevance: <ul style="list-style-type: none"> • FRE 106 • liability • seriousness of violations • history of violations • good faith efforts to comply Authentication: Numerous witnesses can authenticate
1639	EPA Region 10 Guidance for WQBEL's Below Analytical Detection/Quantitation Level	TC 004872-4882 RD	Hearsay, Relevance, Authentication	Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 803(18) Learned Treatise • FRE 807 Relevance <ul style="list-style-type: none"> • Explain DMR's • seriousness of violations • history of violations • good faith efforts to comply Authentication <ul style="list-style-type: none"> • FRE 902(5) • Multiple witnesses can authenticate

1640	EPA Quality Assurance Memorandum dated April 16, 1999 for TDS Project Samples Total Metals in Water; Total Hardness from Stephanie Le to Michael Letourneau	TC 004258-4285 RD	Hearsay, Authentication	Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 Authentication • FRE 902(5) • Multiple witnesses can authenticate
1641	EPA Memorandum dated June 9, 1999 from Dave Mount to Mike Letourneau re Results fo TDS Toxicity Testing	TC 004286-4294 RD	Hearsay, Relevance, Authentication	Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 Relevance <ul style="list-style-type: none"> • Explain DMR's • seriousness of violations • history of violations • good faith efforts to comply Authentication <ul style="list-style-type: none"> • FRE 902(5) • Multiple witnesses can authenticate

1642	EPA Guidance on Water quality Based Effluent Limits Set Below Analytical Detection/Quantitation Limits dated April 25, 2005	TC 034652-34654 RD	Hearsay, Authentication	Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5)Recorded recollection • FRE 807 • FRE 803(18) Learned Treatise Authentication • FRE 902(5) • Multiple witnesses can authenticate
1643	April 21, 2002 letter from Micheal Gearhed, EPA to Lynn Kent, ADEC re EPA Review of Main Stem Red Dog Creek Site-Specific Criterion for Arctic Grayling spawning period	TC 037222-37224 RD	Hearsay, Authentication	Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5)Recorded recollection • FRE 807 • FRE 902(5) • Multiple witnesses can authenticate
1644	Letter dated July 23, 1999 from ADF&G, Alvin Ott to Roger Mochnick, US EPA re TDS	TC 004318-4319 RD	Hearsay, Authentication	Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5)Recorded recollection • FRE 807 • FRE 902(5) • Multiple witnesses can authenticate

1645	Public Health Evaluation of Exposure of Kivalina and Noatak Residents to Heavy Metals from Red Dog Mine dated October 25, 2001 by Division of Public Health Section of Epidemiology	NA	Hearsay, Relevance (don't need to show health impacts), Authentication	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require. <p>Authentication: Witnesses (Arnold and/or Middaugh) will authenticate.</p>
1646	ADEC Decision Document for a TDS Site-Specific Criterion for Red Dog Creek dated January 12, 2006	TC 037210-37221 RD	Hearsay, Authentication	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection <p>Authentication: Witnesses (McGee and/or Sonofrank) will authenticate.</p>

1647	Kivalina Sanitary Survey dated May 2004 by ASCG Incorporated	TC 030574-30694B RD	Relevance (don't need to show health impacts), Authentication	Relevance to Penalty: <ul style="list-style-type: none"> seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) good faith efforts to comply; Such other matters as justice may require. Authentication: Witness (Pannone) will authenticate.
1648	Discharge TDS SOP	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> Capable of repetition seriousness of violation economic benefit history of violations good faith efforts to comply other matters as justice may require Authentication: Multiple witnesses can authenticate
1649	Sodium Sulfide Dosage Changes SOP dated 2003	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> Capable of repetition seriousness of violation economic benefit history of violations good faith efforts to comply other matters as justice may require Authentication: Multiple witnesses can authenticate

1650	Sodium Sulfide Dosage Changes SOP	TC 037880-37895 RD	Hearsay, Authentication	Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(5) Recorded recollection • FRE 807 Authentication: Multiple witnesses can authenticate
1651	Sodium Sulfide System Process Description	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Capable of repetition • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Authentication: Multiple witnesses can authenticate
1652	In-Stream Control of TDS at Red Dog Mine	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Capable of repetition • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Authentication: Multiple witnesses can authenticate

1653	Toxicity Reduction Evaluation by EVS Environmental Consultants dated December 1999	TC 004610-4654 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; • FRE 807 <p>Relevance:</p> <ul style="list-style-type: none"> • Capable of repetition • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require <p>Authentication: Multiple witnesses can authenticate</p>
1654	Toxicity Identification for Red Dog Mine, Phase I, dated March 2000 EVS Environmental Consultants	TC 004655-4703 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; • FRE 807 <p>Relevance:</p> <ul style="list-style-type: none"> • Capable of repetition • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require <p>Authentication: Multiple witnesses can authenticate</p>

1655	Toxicity Reduction Evaluation Report dated August 2003	TC 032586-32683 RD	Authentication	Authentication: Multiple witnesses can authenticate.
1656	2000 Aquatic Biomonitoring at Red Dog Mine dated May 15, 2001	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Authentication: Multiple witnesses can authenticate
1657	2001 Aquatic Biomonitoring at Red Dog Mine dated May 2002, Report No. 02-04	TC 004863 RD	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Authentication: Multiple witnesses can authenticate
1658	2002 Aquatic Biomonitoring at Red Dog Mine dated 2003, Report No. 03-03	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Authentication: Multiple witnesses can authenticate

1659	2003 Aquatic Biomonitoring at Red Dog Mine dated April 2004, Report No. 04-02	TC 030695-30836B RD	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Authentication: Multiple witnesses can authenticate
1661	2004 Aquatic Biomonitoring at Red Dog Mine dated May 2005, Report No. 05-03	TC 035773 RD	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Authentication: Multiple witnesses can authenticate
1662	2005 Aquatic Biomonitoring at Red Dog Mine dated May 2006, Report No. 06-03	TC 037323 RD	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Authentication: Multiple witnesses can authenticate

1663	2006 Aquatic Biomonitoring at Red Dog Mine dated June 2007, Report No. 07-03	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> seriousness of violation economic benefit history of violations good faith efforts to comply other matters as justice may require Authentication: Multiple witnesses can authenticate
1664	Chart: Sulfate & TDS at Station 1 and 2	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary
1665	Chart: Total Cyanide and WAD Cyanide at Station 2	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary
1666	Chart: Cadmium at Station 1 and 2	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary
1667	Graph: Comparison of Returns-Actual Dow Jones v. Kavanaugh Assumptions July 1, 1999 - January 11, 2008	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary
1668	Chart: Summary of Economic Benefit Results Using the Correct Financial Methodology	NA	Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary
1669	Chart: Methodology that disregards the Distinction Between Ex-Post and Ex-Ante Information	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary

1670	Chart: Economic Benefit Methodology Based on the distinction Between Ex-Post and Ex-Ante Information	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony • FRE 1006 Summary
1671	Aerial view of Red Dog Creek premining	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1672	Aerial view of Tailings pond	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1673	Aerial view of Outfall 001	NA	Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1674	Side view of Outfall 001	NA	Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1675	Area map of Red Dog Mine	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate

1676	Red Dog Mine Mixing Zones: Sta. 150, 9 & 10	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1677	Red Dog Mine Mixing Zones: Sta. 151, 20, 12	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1678	Origin of the Opportunity photograph	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1679	Water Balance tailings pond diagram	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1680	Map of TDS limits	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1681	Graph: Impoundment of TDS 1998-2007	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate

1682	Chart: Discharge Performance by Month to Red Dog Creek	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony • FRE 1006 Summary
1683	Pond Elevation Since 1998	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony • FRE 1006 Summary
1684	Photograph of Red Dog Clean Water Bypass/Diversion System	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1685	Photographs of Middle Fork- Before and After	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1686	Red Dog Operations tailings impoundment photograph	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1687	Photograph of Sulfur Creek, Pre-mining	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate

1688	Photograph of Alvinella Seep	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1689	Photograph of Red Dog Diversion	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1690	Photograph of Clean Water Bypass Upgrades	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1691	Photograph of Clean Water Bypass Upgrades 4	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1692	Diversion Ditch 4 Construction	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1693	Tailing Pond & Dam Locations Map	NA	Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate

1694	Back Dam diagram	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1695	Photograph of Water Treatment Plants	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1696	Photograph of 4 th Sandfilter	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1697	Photograph of new Sandfilter Building	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1698	Photograph of Water Treatment Plant 3	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1699	Aerial photograph of Outfall 001	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate

1700	Water Management diagram of tailings impoundment	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1701	Map: Streams and Sample Locations in the Immediate vicinity of Red Dog Mine	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1702	Map: Streams and Rivers Downstream of Red Dog Mine	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1703	Photograph of Middle Fork Red Dog Creek at point where effluent enters creek dated July 1995	NA	Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1704	Map: Red Dog Creek identification of TDS zones	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1705	Map: Red Dog Creek identification of spawning areas	NA	Relevance, Authentication	Relevance: • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate

1706	Aerial photograph of Red Dog Creek pre-mining	TC 011462 RD	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1707	Chart: Station 1 Average TDS 1991-2005	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary
1708	Chart: Station 1 Average TDS 1999-2005	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary
1709	Spreadsheet: TDS Data Station 10 for 2002 and 2003	NA	Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary
1710	Spreadsheet: Estimated TDS Concentration at Station 10 on July 7, 1999	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary
1711	Figure 104: Dolly Varden Kidney Tissue, Cadmium	NA	Relevance, Authentication	Relevance and Authentication: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony FRE 1006 Summary

1712	August 10, 2000 letter re Red Dog Mine: Request for Site-Specific Criteria, Authorization of Mixing Zones and Modification of 401 Certification	TC 003411-3418 RD	Relevance, Authentication	<p>Relevance to Penalty:</p> <ul style="list-style-type: none"> seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) good faith efforts to comply; Such other matters as justice may require; economic benefit, because shows no available technology to sufficiently reduce TDS in effluent. <p>Authentication: Witnesses (Kulas and/or McGee) will authenticate</p>
1713	January 9, 2001 letter re Red Dog Mine Revised Request for Site-Specific Criterion	TC 004921-4929 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> FRE 803(6) Business record; FRE 803(8) Public record; <p>Authentication: Witness (Kulas and/or McGee) will authenticate</p> <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) good faith efforts to comply; Such other matters as justice may require.

1714	December 20, 2002 letter to Walter Sampson re sanitary water survey in Kivalina	TC 029902-29909 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(5) Recorded recollection; <p>Authentication: Witnesses (Kulas and/or Sampson) will authenticate</p> <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.
1715	February 5, 2003 letter to Millie Hawley re fish tissues	TC 011329 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; <p>Authentication: Witness (DeCicco) will authenticate</p> <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.

1716	March 4, 2003 letter to Craig Paulson re Village of Kivalina Drinking Water Sample Results	TC 031633-31639 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; <p>Authentication: Witnesses (Scott and/or Paulsen) will authenticate</p> <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.
1717	April 29, 2003 letter from ADF&G to Millie Hawley re fish samples	TC 031633-31639 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; <p>Authentication: Witness (Ott) will authenticate</p> <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.

1718	<p>June 27, 2003* US EPA Memorandum to Craig Paulsen re Peer Review and Verification of the Total Metals, and Hardness Analyses for Kivalina Village</p> <p>*Incorrect date of June 27, 2004 on exhibit list and Plaintiffs' chart.</p>	TC 012443-12456 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; <p>Authentication: Witness (Paulsen) will authenticate</p> <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.
1719	Drinking Water Sampling memo dated July 14, 2003 by Joe Wallace and Eva Chun	TC 012573-12589 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; <p>Authentication: Witness (Chun) will authenticate</p> <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.

1720	<p>August 14, 2003* EPA Memorandum to Craig Paulsen re Data Verification Report of Volatile Organic Analyses' Results for the Kivalina Village Project Samples</p> <p>*Incorrect date of August 14, 2002 on Plaintiffs' chart.</p>	TC 012601-12690 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; <p>Authentication: Witnesses (Paulsen and/or Cohon) will authenticate</p> <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.
1721	<p>October 2, 2003 EPA Memorandum to Craig Paulsen re Case narrative with Peer Review Memo for Kivalina Water Sampling for Haloacetic Acids in Water</p>	TC 012530-12538 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; <p>Authentication: Witness (Paulsen) will authenticate</p> <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require.

1722	June 10, 1999 email from Phyllis Scannell to EPA re effects of TDS in Red Dog Creek	TC 003447-3448 RD	Hearsay, Authentication, Relevance	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 <p>Relevance:</p> <ul style="list-style-type: none"> • seriousness of violation; • history of violations • good faith efforts to comply; • other matters as justice may require <p>Authentication Scannell can authenticate</p>
1723	July 12, 1999 email from Mark Thompson to Bruce Woods/EPA re Cyanide Detection Limit	TC 004934-4938 RD	Hearsay, Authentication	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 <p>Authentication Thompson can authenticate</p>
1724	July 27, 2002 Memorandum from Al Ott to Pete McGee re Red Dog Mine - distribution of Spawning Fish, Mixing Zone Requests for TDS	TC 005198-5205 RD	Hearsay, Authentication	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 <p>Authentication Ott and others can authenticate</p>
1725	Topographical Map of Spawning Areas	TC 005206 RID	Authentication	<p>Authentication Ott, Scannell, and others can authenticate</p>

1726	February 24, 2005 Memorandum from Mark Thompson to Pete McGee re Cadmium Natural Background SSC, Red Dog Creek	TC 034627-34628 RD	Hearsay, Relevance, Authentication	<p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; <p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require. <p>Authentication: Witnesses (Thompson and/or McGee) will authenticate</p>
1727	Red Dog Spring Trip Report May 23 - June 9, 2004	TC 035762-35764 RD	Relevance, Hearsay, Authentication	<p>Relevance to Penalty:</p> <ul style="list-style-type: none"> • seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) • good faith efforts to comply; • Such other matters as justice may require. <p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection; <p>Authentication: Witnesses (Townsend) will authenticate</p>

1728	Red Dog Spring Trip Report June 10 - 17, 2006	TC 037324-37331 RD	Relevance, Hearsay, Authentication	Relevance to Penalty: <ul style="list-style-type: none"> seriousness (significance of violations; harm to health and environment; duration of non-compliance; history of violations) good faith efforts to comply; Such other matters as justice may require. Hearsay <ul style="list-style-type: none"> FRE 803(6) Business record; FRE 803(8) Public record; FRE 803(5) Recorded recollection; Authentication: Witnesses (Townsend) will authenticate
1733	Alaska Miners Association Discussion: Environmental Permitting-Priorities & Approaches	TC 034544-34571 RD	Relevance, Hearsay, Authentication	Relevance: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony seriousness of violation economic benefit history of violations good faith efforts to comply economic effect other matters as justice may require Authentication: Andrews can authenticate
1734	Red Dog Use Attainability Analysis Aquatic Life Component dated February 1996 by Phyllis Weber Scannell	TC 031166-31203A RD	Relevance, Hearsay, Authentication	Relevance: <ul style="list-style-type: none"> Demonstrative Exhibit illustrating witness testimony seriousness of violation economic benefit history of violations good faith efforts to comply

				<ul style="list-style-type: none"> • other matters as justice may require Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 Authentication: Scannell can authenticate <ul style="list-style-type: none"> • FRE 1005 • FRE 902(5)
1735	Effects of Total Dissolved Solids on Aquatic Organisms dated June 2001 by Phyllis Weber Scannell	TC 004445-4481 RD	Relevance, Hearsay, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 Authentication: Scannell can authenticate <ul style="list-style-type: none"> • FRE 1005 • FRE 902(5)

1736	Comparison of Mainstem Red Dog Creek premining and Current Conditions dated March 2005 by Phyllis Weber Scannell	TC 036809-36830 RD	Relevance, Hearsay, Authentication	<p>Relevance:</p> <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require <p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 <p>Authentication: Scannell can authenticate</p> <ul style="list-style-type: none"> • FRE 1005 • FRE 902(5)
1737	November 28, 2005 letter from Phyllis Weber Scannell to Al Ott re Fish Tissue data from the Wulik and Kivalina Rivers	TC 035936-35954 RD	Relevance, Hearsay, Authentication	<p>Relevance:</p> <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require <p>Hearsay</p> <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 <p>Authentication:</p>

				Scannell, Ott and others can authenticate <ul style="list-style-type: none"> • FRE 1005 • FRE 902(5)
1738	Aquatic Baselines Sampling, Wulik River Drainage Volume I: Summary of Biological and Water Quality Information dated April 2006 by Al Ott and Phyllis Weber Scannell	TC 037366 RD	Relevance, Hearsay, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 Authentication: Scannell, Ott and others can authenticate <ul style="list-style-type: none"> • FRE 1005 • FRE 902(5)

1738B	Aquatic Baselines Sampling, Wulik River Drainage Volume II: Appendices of Tabulated Data dated April 2006 by All Ott and Phyllis Weber Scannell	TC 037367 RD	Relevance, Hearsay, Authentication	Relevance: Demonstrative Exhibit illustrating witness testimony <ul style="list-style-type: none"> • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 Authentication: Scannell, Ott and others can authenticate <ul style="list-style-type: none"> • FRE 1005 • FRE 902(5)
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1740	Juvenile Dolly Varden Whole Body Metals Analyses, Red Dog Mine (2002) dated May 2004 by Al Ott and William Morrise	TC 03174 RD	Relevance, Hearsay, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony • seriousness of violation • economic benefit • history of violations • good faith efforts to comply • other matters as justice may require Hearsay <ul style="list-style-type: none"> • FRE 803(6) Business record; • FRE 803(8) Public record; • FRE 803(5) Recorded recollection • FRE 807 Authentication: Ott and others can authenticate <ul style="list-style-type: none"> • FRE 1005 • FRE 902(5)
1741	Oversize Map of Red Dog Mine Environmental Stations	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate
1742	Oversize Map of Red Dog Mine Environmental Stations including Station 1 and Chukchi Sea	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate

1743	Oversize Map of Kivalina Area Use	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate <ul style="list-style-type: none"> • FRE 902(5) • FRE 803(8)
1744	Oversize Map of Kivalina Community	NA	Relevance, Authentication	Relevance: <ul style="list-style-type: none"> • Demonstrative Exhibit illustrating witness testimony Authentication: Multiple witnesses can authenticate <ul style="list-style-type: none"> • FRE 902(5) • FRE 803(8)